

AMENDMENTS TO THE CLAIMS:

1-16 (Cancelled)

17. (New) An integrating apparatus comprising:

a plurality of integrating circuits each operable to integrate an input signal and to output an integrated signal; and

an output unit operable to selectively derive an output having a lowest level from among integrated signals output from said plurality of integrating circuits;

wherein said plurality of integrating circuits each have a different fall time constant.

18. (New) The integrating apparatus according to claim 17, wherein said plurality of integrating circuits are each controlled so that an average value of the output level becomes higher as the fall time constant becomes smaller.

19. (New) The integrating apparatus according to claim 17, further comprising a plurality of first amplifiers operable to amplify the input signal and to output the amplified input signal to said plurality of integrating circuits, respectively;

wherein each of said plurality of first amplifiers has an amplification factor corresponding to the fall time constant of a respective one of said plurality of integrating circuits to which the input signal is inputted such that the amplification factor is larger when the fall time constant is smaller.

20. (New) The integrating apparatus according to claim 19, wherein each of said plurality of integrating circuits comprises:

an adder operable to add the amplified input signal and a feedback signal, and to output a resultant added signal;

a delaying unit operable to delay the resultant added signal and to produce a delayed output signal; and

a second amplifier operable to amplify the delayed output signal and to produce an amplified output signal; and

wherein the amplified output signal output from said second amplifier is inputted to said adder as the feedback signal, and the resultant added signal is produced as integrated signal output from said integrating circuit.

21. (New) The integrating apparatus according to claim 20, wherein said second amplifier has a gain of less than one.

22. (New) The integrating apparatus according to claim 21, wherein said adder is operable to sample and compute the integrated signal at predetermined sampling time intervals.

23. (New) The integrating apparatus according to claim 22, wherein said delaying unit is operable to delay the integrated signal on a timescale of the predetermined sampling time intervals.

24. (New) The integrating apparatus according to claim 20, wherein said adder is operable to sample and compute the integrated signal at predetermined sampling time intervals.

25. (New) The integrating apparatus according to claim 24, wherein said delaying unit is operable to delay the integrated signal on a timescale of the predetermined sampling time intervals.

26. (New) An audio system comprising:
a detecting unit operable to detect a noise signal in response to a noise level;
a plurality of integrating circuits each operable to integrate the noise signal detected by said detecting unit and to output an integrated signal;

an output unit operable to selectively derive an output signal having a lowest level from among integrated signals output from said plurality of integrating circuits, and to output a control signal as the selectively derived output signal;

an audio source operable to output an audio signal; and

an attenuating unit operable to attenuate the audio signal in response to a level of the control signal outputted by said output unit;

wherein each of said plurality of integrating circuits have a different fall time constant.

27. (New) The audio system according to claim 26, wherein said plurality of integrating circuits are each controlled so that an average value of the output level becomes higher as the fall time constant becomes smaller.

28. (New) The audio system according to claim 26, further comprising a plurality of first amplifiers operable to amplify the noise signal and to output the amplified noise signal to said plurality of integrating circuits, respectively;

wherein each of said plurality of first amplifiers has an amplification factor corresponding to the fall time constant of a respective one of said plurality of integrating circuits to which the noise signal is inputted such that the amplification factor is larger when the fall time constant is smaller.

29. (New) The audio system according to claim 28, wherein each of said plurality of integrating circuits comprises:

an adder operable to add the amplified noise signal and a feedback signal, and to output a resultant added signal;

a delaying unit operable to delay the resultant added signal and to produce a delayed output signal; and

a second amplifier operable to amplify the delayed output signal and to produce an amplified output signal; and

wherein the amplified output signal output from said second amplifier is inputted to said adder as the feedback signal, and the resultant added signal is the integrated signal output from said integrating circuit.

30. (New) A signal processing apparatus comprising:
at least one sensor operable to detect a level of a physical value or a chemical value; and
said integrating apparatus according to claim 17, to which an output of said at least one sensor is supplied.

31. (New) A signal processing apparatus comprising:
at least one sensor operable to detect a level of a physical value or a chemical value; and
said integrating apparatus according to claim 18, to which an output of said at least one sensor is supplied.

32. (New) A signal processing apparatus comprising:
at least one sensor operable to detect a level of a physical value or a chemical value; and
said integrating apparatus according to claim 19, to which an output of said at least one sensor is supplied.

33. (New) A signal processing apparatus comprising:
at least one sensor operable to detect a level of a physical value or a chemical value; and
said integrating apparatus according to claim 20, to which an output of said at least one sensor is supplied.

34. (New) A signal processing apparatus comprising:
at least one sensor operable to detect a level of a physical value or a chemical value; and
said integrating apparatus according to claim 21, to which an output of said at least one sensor is supplied.

35. (New) A signal processing apparatus comprising:
at least one sensor operable to detect a level of a physical value or a chemical value; and
said integrating apparatus according to claim 22, to which an output of said at least one
sensor is supplied.

36. (New) A signal processing apparatus comprising:
at least one sensor operable to detect a level of a physical value or a chemical value; and
said integrating apparatus according to claim 23, to which an output of said at least one
sensor is supplied.

37. (New) A signal processing apparatus comprising:
at least one sensor operable to detect a level of a physical value or a chemical value; and
said integrating apparatus according to claim 24, to which an output of said at least one
sensor is supplied.

38. (New) A signal processing apparatus comprising:
at least one sensor operable to detect a level of a physical value or a chemical value; and
said integrating apparatus according to claim 25, to which an output of said at least one
sensor is supplied.